

Control and Prevention of Tuberculosis

Thailand Country Narrative Family Health International (FHI 360)

**FY2014 Annual Performance Report
(October 1, 2013 –September 30, 2014)**



CAP-TB
CONTROL AND PREVENTION
OF TUBERCULOSIS

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Acronyms

BTB	Bureau of Tuberculosis (Thailand)
CAP-TB	Control and Prevention of Tuberculosis (Greater Mekong Sub-region Multidrug Resistant Tuberculosis Prevention and Management Project)
DOT	Directly Observed Therapy
FHI 360	Family Health International
FY	Fiscal year
IA	Implementing Agency
IR	Intermediate Result
MDR-TB	Multidrug resistant tuberculosis
NCCM	National Catholic Commission on Migration
NTP	National TB Control Program
PHO	Provincial Health Office
SHPH	Sub-district Health Promotion Hospital
TA	Technical assistance
TB	Tuberculosis
USAID	United States Agency for International Development
VHV	Village Health Volunteer

Narrative I: Executive Summary

FY14 was a productive year for the CAP-TB Thailand team, with ownership and commitment strongly demonstrated by the TB team in Rayong. During FY14, the CAP-TB Thailand continued to support three CAP-TB coordinators at Rayong Provincial Health Office (PHO) and Rayong Hospital who played a significant role in conducting the monthly project meetings and case conference, laying the groundwork for honing their roles and responsibilities to integrate into the TB system sustainably.

During the first six months of FY14, the team also focused on closing out the sub-agreement for CAP-TB implementing agency, National Catholic Commission on Migration (NCCM). NCCM transferred TB and MDR-TB patients over to the TB network for continuity, care, and support: Rayong PHO, health care providers at provincial, district, sub-district and community levels, local administration organizations (municipalities and sub-district administration organization), Rayong Central Prison, village health volunteers, and non-governmental organization. By the end of March 2014, NCCM successfully transferred all 29 TB and MDR-TB patients who had been supported by them to local partners.

The main focus for the project in Rayong Province was the development of technical capacity of the Rayong TB multi-disciplinary team and network. This was done through teaching sessions on TB and MDR-TB at monthly case conferences with the goal to increase expertise in MDR-TB management. The monthly case conferences provided a platform for the network to monitor the MDR-TB situation in Rayong and to regularly track treatment outcomes for patients.

At the national level, CAP-TB project continues to support and collaborate with the Bureau of Tuberculosis (BTB) to strengthen decentralization of MDR-TB expertise in the country, specifically through the implementation of an online helpdesk which will enable the BTB to track clinical questions received from physicians from all over the country in a systematic manner. This information could benefit the BTB to support physicians at the provincial level and promote standardized patient management throughout the country.

Narrative II: Program performance/achievements and key challenges encountered during reporting period by thematic area

1. MDR-TB Prevention

Activity 1.1.1: Increase local political commitment from administrative organizations and health authorities to support the prevention of MDR-TB in communities

The meeting for project stakeholders in Ban Khai was organized on December 13, 2014 and was an important platform to discuss the roles of village health volunteers (VHVs) in screening for presumptive TB patients among at-risk populations, namely elderly persons, diabetics and close contacts of TB patients; referral of presumptive and active TB patients for further diagnosis and treatment and Directly Observed Therapy (DOT) provision and support to patients. Twenty people attended the meeting (seven males, 13 females). The participants comprised 11 volunteers, six sub-

district health promotion hospital (SHPH) personnel and three representatives from Nong Bua Sub-district Administration Organization (SAO).

It was agreed that the VHVs play an important role in screening and referral of presumptive TB patients to health facilities for further work-up and diagnosis. The VHVs will conduct the screening every three months for individuals with TB/MDR-TB risk factors as defined by the BTB.

The participants also discussed the roles of VHVs in DOT provision and support to patients and agreed on a schedule for VHV DOT that “ramps up” their responsibilities as they increase their experience. The VHVs will provide DOTs for TB patients at least two days per week in the first month, three days per week during the second and third months and five days per week during the fourth to sixth months. Health care providers will provide intensive supervision to the volunteers during the first three months and at least once a week during the fourth to sixth months. This is to ensure quality of care and monitoring the VHV’s activities.

During the reporting period, three VHVs in Ban Khai provided DOT for TB patients. SHPH health care providers regularly followed up on the volunteers to provide further support and assistance needed in patient care.

SHPH health care providers have been trained to provide DOT for MDR-TB patients. However, at the moment there is no MDR-TB case in Ban Khai.

Activity 1.1.2: Promote knowledge and awareness among the general public about TB and MDR-TB

A total of 1,203 individuals (392 males, 811 females) were reached with TB prevention and treatment messages through small group activities and World TB Day events ([CAP-TB indicator 2/USAID PMP indicator 9](#)).

Rayong PHO in partnership and collaboration with NCCM, the four hospitals and Foundation for AIDS Rights (FAR) organized campaign activities to raise awareness among the public about TB/MDR-TB and HIV. The activities were organized in the four project target areas namely Muang (24 March), Klaeng (25 March), Mabtapud (27 March) and Ban Khai (31 March). A total of 587 people attended the event (191 males, 396 females; 180 in Muang, 235 in Klaeng, 53 in Mabtapud and 119 in Ban Khai). The CAP-TB Chief of Party attended the campaign event in Muang and gave welcome remarks at the event. The Director of Public Health and Environment Department, Rayong City Municipality chaired the opening ceremony of the event.

In all areas, free health check-up services, exhibition booths and games and quizzes were provided and organized for interested individuals. In Muang, a parade to raise awareness of the communities about TB/MDR-TB and HIV was also arranged.

A total of 616 individuals (201 males and 415 females) in the four project target areas received TB prevention and treatment messages through small group activities (primarily TB screening).

2. MDR-TB Management

IR 2.1: Ensured capacity, availability, and quality of laboratory testing to support the diagnosis and monitoring of TB patients, including the rapid diagnosis of MDR-TB

Activity 2.1.1: Provide technical assistance to build laboratory capacity in good clinical laboratory practice

In collaboration with Rayong PHO, the CAP-TB project organized a training on good clinical laboratory practice (GCLP) on January 16-17, 2013. Nine laboratory personnel (seven females, two males) from seven provincial and district hospitals (Rayong, Klaeng, Ban Chang, Ban Khai, Pluak Daeng, Maptaphud and Nikhompattana hospitals – CAP-TB indicator 8/PMP indicator 15) attended the training. Key issues covered in the training included the development and maintenance of laboratory documents such as standard operating procedure, laboratory audit standards and requirements, recording of lab findings and errors, quality laboratory practices and standard laboratory practices. The participants suggested that the information and knowledge gained could be applied to improve their routine work. In FY15, the project in collaboration with a laboratory specialist from FHI 360 Asia Pacific Regional Office (APRO) will provide technical assistance specific for TB laboratory capacity, with the goal to strengthen TB diagnosis (GeneXpert and conventional culture) and follow-up (culture) with regular monitoring and supervision visits.

IR 2.2: Strengthened case-finding and referrals for MDR-TB

Activity 2.2.1: Strengthen referral system for MDR-TB

The CAP-TB project funds positions for three TB coordinators, one stationed at Rayong PHO and two based at Rayong Hospital. These coordinators are seconded to Rayong PHO and Rayong Hospital and are focal points for CAP-TB Project.

Job descriptions and responsibilities for the coordinators are as follows:

1. One coordinator is the TB coordinator for Rayong PHO
2. One coordinator at Rayong Hospital is responsible for quality DOT provision and telephone hotline service
3. One coordinator at Rayong Hospital is responsible for promoting standardized treatment and care for TB/MDR-TB patients and ensuring timely reporting.

The Rayong PHO coordinator plays a key role in supporting and coordinating between partners, namely Rayong Hospital, Klaeng Hospital, Maptapud Hospital, Ban Khai Hospital, local administrative organizations and local municipalities in the project catchment areas. Her main roles also include sending out invitations to the working group and partners for monthly project meetings and case conferences; preparing and updating contact information of the working group and the partners to facilitate coordination; and summarizing and distributing meeting notes to the entire network.

The two coordinators for Rayong Hospital compile and present MDR-TB patients' information to the TB network at monthly case conferences, one of their key responsibilities. The CAP-TB team has worked intensively with the coordinators to train them on how to prepare and present clinical information. The project supported these three coordinators to develop the best procedure for systematically following the MDR-TB patient cohort on a routine basis, including a patient tracking sheet (updates on treatment outcomes, side effects, etc.); a laboratory tracking sheet (showing culture

results, drug susceptibility testing results, etc.). The multi-disciplinary team of Rayong Hospital is actively involved in organizing and presenting patient information and also provides clinical inputs for specific cases discussed at the conferences.

The three coordinators closely work together to support patients' care and project reporting.

1. **Support to patients:** The Rayong PHO coordinator conducts home visits with one of the Rayong Hospital coordinators (in charge of DOT provision and hotline service) every week. They also work together on referring patients to Rayong Hospital for diagnosis and to local hospitals for treatment.
2. **Reporting:** The Rayong PHO coordinator works closely together with the Rayong Hospital coordinator in charge of treatment and care and reporting to ensure accuracy of data reported under the project.

In order to ensure that these positions are funded by Rayong Hospital and Rayong PHO in the future, CAP-TB will work closely with the Rayong team to assess the roles of the three coordinators on a regular basis for clarity, to avoid duplication of effort among the coordinators (maximizing efficiency), and to demonstrate the need for these positions to support the network in patient care.

During the reporting period, a total of 887 people (494 males and 201 females) were referred for TB and MDR-TB related services ([CAP-TB indicator 3](#)). The majority (620 individuals or 70%) of these individuals were referred to other hospitals beyond the four hospitals participating in the project, and 30% (267 individuals) were referred among the four hospitals where referrals are tracked and reported under the project. Most individuals are referred for continuous care in the community, namely DOT support and home visits. These individuals are referred to district and sub-district level hospitals, district health offices, private health care providers and Foundation for AIDS Rights (FAR) in Rayong Province, including Chonburi PHO. A smaller number of individuals are referred to higher level health facilities for diagnosis or follow-up visits.

One hundred and forty-nine people who were referred for services among the four hospitals have taken up services at the four hospitals. This number constitutes 56% of people referred among the four hospitals (149 out of 267) ([CAP-TB indicator 13](#)). The project has had ongoing discussion with Rayong PHO and the four hospitals about referral tracking throughout the fiscal year. The low referral success rate indicates a large number of patients who are lost to follow-up and requires immediate attention of the project partners to identify the problems in tracking referrals effectively. CAP-TB will further discuss this issue with the project partners and assist them to improve their referral tracking system in the next funding year.

IR 2.3: Strengthened human resource capacity for MDR-TB management

Activity 2.3.1: Conduct case conference for multi-disciplinary team of Rayong Hospitals and physicians from lower-level health facilities in Rayong

The monthly case conferences are aimed to establish a regular systematic MDR-TB patient review and discussion for the TB network.

Case conference/MDR-TB cohort overview: During the reporting period, Rayong PHO coordinated ten monthly case conferences and invited partners and networks to the meeting. The

case conferences were organized back-to-back with the monthly project meeting. At each meeting, the coordinators from Rayong Hospital provided an update on MDR-TB patients in Rayong Province. The information presented include number of MDR-TB patients in Rayong, their lab findings, number of patients who have died and clinical and non-clinical conditions that require special attention or follow-up. Dr. Bralee Santiwut and Dr. Chittima Thibaddee, the pulmonologists at Rayong Hospital, provided clinical input. The monthly case conference also provided an opportunity for the TB network to discuss and together identify potential solutions/interventions to provide better care and support to patients. In addition to the working group, the TB network, including representatives from private hospitals, local administrative organizations and VHVs, attended the conference to be educated on TB and MDR-TB.

During the reporting period, the case conferences were joined by a total of 60 people (50 females, 10 males – [CAP-TB indicator 15/PMP indicator 18](#)). Thirty-nine people are in the working group while the other 21 are from the TB network, two of which are representatives from private hospitals. Eleven are representatives from public hospitals and the other five are VHVs. Of the 53 participants, 33 are medical personnel while the remaining 27 are public health personnel, staff from local administrative organizations and VHVs.

Clinical discussion: From July 2013 to September 23, 2014, there was a total of 53 MDR-TB patients (12 females, 41 males) in Rayong Province, 20 of which (six females, 14 males) were co-infected with HIV. The majority of the patients were in the age range of 20-39 years old. Of the 53 patients, six died during the reporting period (two females, four males) and three of those who died were HIV co-infected (one female, two males).

1. The case conferences allowed the working group and the TB network to discuss two cases that require special attention or follow-up, which led to clarification of treatment and social health benefits, and coordination between hospitals and related agencies near the patients' homes in Maptapud Municipality, Ban Chang Hospital, and Maptapud Hospital. One of these two patients later developed the following symptoms: coughing out blood, having fever, pneumonia and malnutrition condition. She passed away on December 15, 2013.
2. The case conferences were also a platform to support the transfer of TB and MDR-TB patients under the care of NCCM to the local network. The participants were informed of NCCM's progress on DOT provision to TB and MDR-TB patients.
 - a. From the project's inception in July 2012 to March 31, 2014, NCCM provided DOT to 20 new TB patients in the four project catchment areas: six patients in Ban Khai District, seven patients in Ban Phe Sub-district, two patients in Klaeng District and five patients in Maptapud Sub-district. Out of the 20 patients, two are still on treatment; others have completed the treatment. There were also three cases of close contacts (two completed treatment, one were suspended on the treatment).
 - b. NCCM cared for a total of nine MDR-TB patients in the four project catchment areas and other areas in Rayong province: one in Ban Khai District under the care of Camillian Center (an inpatient center caring for PLHIV), one in Ban Phe Sub-district, two in Klaeng District, four in Maptapud Sub-district and one in Muang District. Out of the nine patients, one has died, five are still on treatment and the rest have completed the treatment. One case in Ban Phe, who had a very challenging clinical course complicated by a cancer diagnosis and severe depression, has now successfully completed his treatment in 18 June 2014 and

improved emotionally. He was healthy at his first follow-up visit on 8 September 2014. His next visit is scheduled on 8 December 2014.

3. The monthly case conference has provided valuable information on the large proportion of MDR-TB patients who are co-infected with HIV, as well as the high mortality among this patient group. These observations led to discussion on the linkages between TB and ARV clinics of Rayong Hospital, the integration between the two, and the analysis of workflow of both clinics. Staff from both clinics have now met to discuss their strategy to increase screening for TB and HIV; and to better coordinate care, particularly for patients with complicated clinical cases. CAP-TB will also assist Rayong Hospital in conducting workflow analysis to define the work burden and identify potential solutions, including task-shifting.
4. Regular patient cohort review enabled early recognition of the rapid increase in MDR-TB cases in the Central Prison. As a result, a meeting with the management and staff of the Central Prison was arranged to discuss their TB/MDR-TB situation, including current measures in infection control and patient management. At the last case conference, Rayong PHO updated the meeting participants that the Bureau of Tuberculosis, Office of Disease Prevention and Control 3, Medical Service Department of Department of Correction together with Rayong PHO and Rayong and Ban Khai hospitals met with management and staff of the Central Prison to discuss the situation. The Bureau of Epidemiology will conduct a contact investigation accordingly. The investigation will be conducted among prison personnel in the Nursing Section (Section 2), inmate volunteers, prison guards in section 2 and 4, and inmates.

In FY15, the project will support costs for chest X-ray and GeneXpert among prisoners with TB and close contacts of prisoners with MDR-TB. Follow up will also be conducted on infection control interventions adopted in the prison.

TB Teaching: At the end of each conference, the CAP-TB project conducted a short teaching session on TB and MDR-TB to participants. The topic of each month was chosen according to a basic curriculum that had been determined at the start of FY14. In the reporting period, five topics were covered, TB and MDR-TB 101, drug side effects, TB/HIV, MDR-TB in children and lab clinical coordination tracking; additional case conferences were focused on discussion of specific cases. After each conference, the CAP-TB team sent emails incorporating a set of questions related to the key topics via Qstream (an online and mobile teaching application), as a way to reinforce their knowledge on the topics discussed during the case conferences. Completion and mastery of the Qstream questions was defined by correctly answering each of the questions twice. To determine if conference participants who used Qstream had higher knowledge mastery than their counterparts, the CAP-TB team administered a “FY14 Final TB Quiz”, comprising 20 questions, which was sent to the whole Rayong TB team.

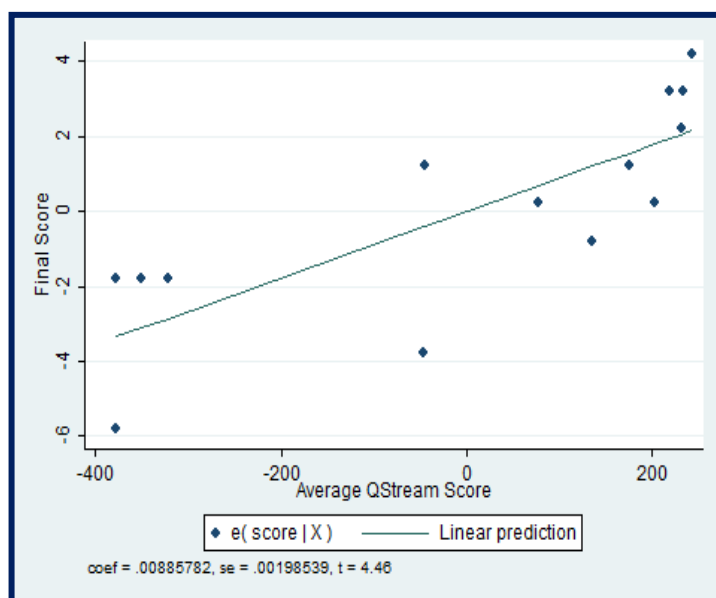


Figure 1. TB knowledge and retention (Final Score) is positively correlated with QStream participation (Average QStream Score)

We analyzed the results to see if TB knowledge (Final Score) was associated with participation in the monthly teaching and QStream quizzes (Average QStream Score) that were administered throughout the year. We found that TB knowledge retention was positively correlated with QStream participation, Figure 1 and Table 1 ($R = 0.59$). Although the sample size is small, the results suggest that this method of teaching is effective in improving and retaining TB knowledge. Given the high turnover among TB staff in Thailand, it is important to identify an efficient and effective method to certify and maintain basic TB knowledge among new and old staff. The CAP-TB Rayong method for teaching through case conferences and QStream may be one solution. The QStream methodology will also be used in FY15 to complement TB Nurse's Curriculum that will be conducted by the Anti-TB Association of Thailand in partnership with the Bureau of Tuberculosis.

Table 1. Raw data from QStream courses and final score from the “FY14 Final TB Quiz”.							
User	Final Score (max 20)	Qstream 1	Qstream 2	Qstream 3	Qstream 4	Qstream 5	QStream_avg
4	18	80	750	588	575	575	622
9	16	291	750	516	600	575	610.25
5	17	411	750	588	525	585	612
25	10	80	385	146	330	465	331.5
28	13	76	725	436	525	370	514
10	14	96	665	511	600	550	581.5
45	12	0	0	0	0	0	0
12	17	316	725	563	525	575	597
21	12	30	60	73	0	90	55.75
8	15	0	725	86	450	70	332.75
31	12	0	0	0	110	0	27.5
26	8	96	0	0	0	0	0
6	14	60	615	273	545	390	455.75
13	15	116	695	486	545	490	554

The Rayong PHO coordinator took minutes of all monthly meetings, gathered all materials and distributed them to the working group and the network in the contact list, including the Bureau of Tuberculosis and the Office of Disease Prevention and Control 3 Chonburi.

During the reporting period, NCCM in cooperation with Rayong PHO and related local administrative agencies organized the intensive DOT trainings for village health volunteer (VHV) leaders in the four project catchment areas. The training was aimed not only to review the importance of DOT, but also to emphasize the roles of VHV leaders in supporting TB and/or MDR-TB patients and the wider TB network (lower level health facilities and local administration organizations) to promote care, including treatment adherence and success. Representatives from Rayong PHO and NCCM attended all trainings. A total of 94 VHV leaders and representatives from lower-level health facilities and local administration organizations attended the training (17 in Ban Khai, 20 in Ban Phe, 37 in Klaeng and 20 in Mabtapud – [CAP-TB indicator 16](#)).

In addition to reviewing TB and MDR-TB knowledge and information for the participants, the importance of VHV leaders' roles in providing care and support to patients to promote treatment adherence and success was also emphasized. In particular, the trainer highlighted the VHV leaders'

roles in informing health care providers about the side effects that patients are experiencing and the referral system. The participants were also trained on how to fill in the DOT book correctly.

In all project catchment areas, the trained volunteers provided DOT for TB patients, with regular monitoring and supervision support from SHPH health care providers. Involving the volunteers in DOT provision has eased the burden from the SHPH health care providers and contributed to the coverage for patient care.

In FY15, CAP-TB will support Rayong PHO and the TB network to strengthen quality DOT provision to MDR-TB patients. In particular, the project will assist the partners to review TB/MDR-TB IEC materials and will also support new IEC material development and home visit kit production. The latter will be given to support those conducting home visits, as well as providing a measure of standardization for the visits.

IR 2.4: Scaled-up quality treatment and community approached for PMDT

Activity 2.4.1: Strengthen community-based DOT services

NCCM provided care and support for a total of 29 TB (20 cases) and MDR-TB (nine cases) patients in the four project catchment areas namely Mabtapud Municipality and Ban Phe Municipality in Muang District, Klaeng Municipality in Klaeng District and Nong Bua SAO in Ban Khai District.

During the reporting period, NCCM successfully transferred patients working in close coordination with Rayong PHO and Rayong Hospital to local health facilities for continuous care and support. In Mabtapud, it was agreed among the network that Mabtapud Hospital would be responsible for arranging daily package of drugs for patients while Ta Kuan Health Center would provide injection and DOT (one time each day) for the patients. The multi-disciplinary team from Rayong Hospital, Rayong PHO and NCCM followed up and provided necessary support to health facilities in the area once a week.

For NCCM's supported patients, transfer to local health facilities required identification of responsible persons in each area who assumed NCCM's responsibilities for supporting the patients. DOT providers and supporters include health care providers at district and sub-district level health facilities, personnel from local administrative organisations and village health volunteers. The multi-disciplinary team at Rayong Hospital supports the distribution and arrangement of patient's medicines to the lower-level facilities.

The project will build on the work of NCCM and continue to work closely with the TB network which comprises Rayong Provincial Health Office, the four hospitals, local administration organizations and the community to promote coordination among the network and support them to provide quality care for the patients. The multi-disciplinary team of Rayong Hospital, Rayong PHO and SHPHs conducted home visits to patients who had been transferred from NCCM on every Thursday to identify problems or adverse drug side effects.

3. Strategic Information

IR 3.1: Strengthened capacity of TB programs to collect, use, and analyze data for management

Activity 3.1.1: Support the BTB on the decentralization of MDR-TB expertise

The CAP-TB project assisted the BTB in setting up an online helpdesk which will allow systematic tracking of clinical questions received from doctors at the provincial level throughout Thailand. During the reporting period, user accounts were successfully created for seven MDR-TB experts who provide advice on MDR-TB patient management. The online helpdesk has been piloted with 17 provincial-level doctors, and discussion is currently in process for further scale-up of the network. The goal is to reach each of Thailand's 76 provinces and regional centers (Office of Disease Prevention and Control) with the online system.

During the reporting period, the project worked in close collaboration with the BTB to develop a communication plan to promote the system through the BTB's network. CAP-TB assisted the BTB in developing a one-pager that introduces the online helpdesk as a tool to help physicians seek advice from MDR-TB experts. The project also assisted the BTB in designing a special logo that will be used in all communications regarding the online helpdesk. The BTB will send out letters to all 12 Office of Disease Prevention and Controls, 77 Public Health Offices and Bangkok Metropolitan Administration (BMA) to officially launch the online helpdesk during Q1 FY15.

In addition to the letters, the BTB will send bi-weekly e-mails to their main audiences namely Regional and Provincial TB Coordinators, BMA TB Coordinators and physicians. These emails will introduce the MDR-TB experts, promote system use and provide information about TB/MDR-TB patient management standard.

IR 3.2: Increased TB research activities: There is no activity under this IR.

4. Monitoring and Evaluation

Country Program Manager for CAP-TB Project, Thailand Program together with CAP-TB Chief of Party and a Program Officer from Program Management Unit, FHI 360 APRO conducted site visits to Rayong Province every month to attend monthly project meeting and case conference and to provide supportive supervision for the implementing agencies (IAs) on project implementation and monitoring.

The monthly CAP-TB project meeting were organized for the working groups which comprise representatives from Rayong PHO, the four hospitals (namely Rayong, Klaeng, Ban Khai and Mabtapud) and NCCM. During the reporting period, 10 project meetings were held. Approximately 16-24 working group members attended the meeting. The monthly project meeting also provides a channel for the project and the working group to regularly discuss planning of activities and updates, exchange of ideas and experience, as well as feedback on project implementation. Important topics discussed include project monitoring and reporting, CAP-TB participation in the Union World Conference on Lung Health, project mid-term evaluation, World TB Day events, VHV training, monitoring of quality DOT provision, including FY15 key activity planning and experience of the Rayong TB team's visit at Wang Nam Yen Hospital. Discussion of the team's site visit to this hospital enabled the team to consider the purpose of site visits; the importance of information and experience sharing beyond the CAP-TB project implementation.

5. Enabling environment for MDR-TB control and prevention

IR 5.1: Improved capacity of NTPs to develop, finance, and implement national TB control strategies in line with global strategies

Activity 5.1.1: Strengthen involvement of the private sector for MDR-TB prevention and

Rayong PHO invited representatives from Mongkut Rayong Hospital to attend the monthly case conferences to be informed of patients' profiles and issues in each area. Two female representatives from Mongkut Rayong Hospital have attended all conferences.

In FY15, CAP-TB will continue to support Rayong PHO in involving private hospitals in the bi-monthly case conference. The project will also support Rayong PHO in strengthening TB patient referrals from private hospitals to public hospitals as well as strengthening patient information reporting by the private hospital to Rayong PHO.

6. Capacity building and technical assistance

The CAP-TB Project (Thailand Program) built program management and technical capacity in TB/MDR-TB management of the project implementing agencies through monthly project meetings and monthly case conferences.

The monthly project meetings provided regular opportunities to build capacity, with discussion on a broad spectrum of topics, including progress on implementation of project activities; sharing of experience and lessons learnt from study visits; as well as clinical discussions on complex cases. At the monthly case conferences, the CAP-TB project conducted 20-minute teaching sessions for the meeting participants who are medical and non-medical professionals as well as representatives from the communities (local administration organization personnel and village health volunteer leaders). The teaching sessions covered different TB/MDR-TB related topics each month. Dr Anh Innes, Chief of Party, CAP-TB Project, led the teaching sessions, which was translated into Thai for the participants. After each conference, participants received questions on the teaching topics through Qstream (an online and mobile teaching application), sent to their e-mail. These follow-up questions were intended to help them review and retain the knowledge they had received.

In addition, intensive capacity building has been done with the three CAP-TB coordinators who are based at Rayong Hospital and Rayong Provincial Health Office. The areas of focus range from technical in clinical TB skills, to data organization and presentation, case presentation, and TB referral network strengthening.

Table: Program level monitoring results (Please fill in separate excel sheet)

Annex I: Method used to estimate total number of individuals reached and adjustment factor to calculate for potential overlap among different partners and other USG (Narrative)

No estimations were made of data reported in the SAPR; all data reported are actual numbers.

Rayong Province receives funding from the Global Fund, however, CAP-TB activities and support are completely distinct from Global Fund support. CAP-TB's focus on technical capacity building, case conferences, and TB network strengthening do not overlap with the Global Fund activities in Rayong.

Annex II: Processes carried out to ensure data quality

Rayong PHO and NCCM Field Manager are responsible for the review and verification of data submitted from the four hospitals and NCCM field staff respectively. The CAP-TB Thailand Country Program Manager reviewed data submitted by Rayong PHO and NCCM. CAP-TB Project would ask for further verification and confirmation of the reported data from Rayong PHO and NCCM as necessary to ensure data accuracy.

Annex III: Summary of accomplishments against the work plan and targets (see separate Excel sheet)

The summary of FY14 semi-annual achievements are provided in the Data Collection Sheet and in the CAP-TB Summary Narrative, Annex III.